

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

ALFONSO CIOFFI, et al.,	§	
	§	
<i>Plaintiffs,</i>	§	Case No. 2:13-CV-00103-JRG-RSP
	§	
V.	§	
	§	
GOOGLE, INC.,	§	
	§	
<i>Defendant.</i>	§	

REPORT AND RECOMMENDATION

Plaintiffs currently allege that Google's Chrome web browser infringes seven claims—claims 43 and 70 of U.S. Patent No. RE 43,500, claims 5 and 67 of U.S. Patent No. RE 43,528, and claims 30, 38, and 49 of U.S. Patent No. RE 43,529, all of which relate to computer program products and methods for managing malware downloaded from a network. *See* Dkt. 180. Google moves for summary judgment on two grounds: first, that four claims—claims 43 and 70 of the '500 patent, claim 67 of the '528 patent, and claim 38 of the '529 patent—are invalid under 35 U.S.C. § 251 because the claims recapture subject-matter surrendered during prosecution; and second, that the remaining three claims—claim 5 of the '528 patent and claims 30 and 49 of the '529 patent—are not infringed because these claims require two process steps to be performed on separate processors, and Chrome performs these two steps across multiple processors. Dkt. 148 at 1-2.¹ Google's motions should be DENIED.

¹ Google requested summary judgment for additional claims no longer asserted by Plaintiffs—claim 21 of U.S. Patent No. RE 43,103, claims 21, 30, 32, 39, and 66 of the '500 patent, claims 23, 30, 44, and 64 of the '528 patent, and claims 23, 36, and 45 of the '529 patent. Because Plaintiffs withdrew these claims, *see* Dkt. 180, Google's motion with respect to these claims is DENIED AS MOOT.

I. BACKGROUND

A. Facts Relevant to Google's Recapture Defense

The three asserted patents reissued from U.S. Patent No. 7,484,247, which describes “a system and method for protecting a computer system from malicious software attacks via a network connection,” by “confin[ing] any malware infection that may occur to a separate, protected part of the computer system.” ’247 Patent at 7:38-41, 7:45-48. The ’247 patent describes an architecture, represented by Figure 1 below, which includes (1) a “first processor 120 (P1) communicatively coupled to a first memory and data storage area 110 (M1),” where protected data is stored, and (2) a “[s]econd processor 140” coupled to a “second memory and data storage area 130 (M2),” where malware is confined. *Id.* at Fig. 1, 9:30-38, 10:29-43.

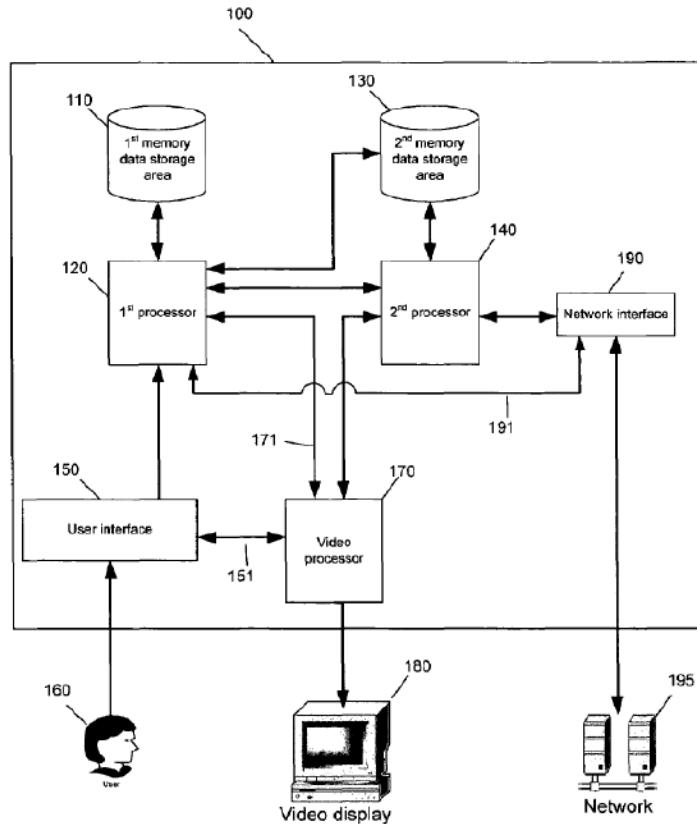


Fig. 1

While the '247 patent describes a system that includes two processors, the original claims of the '247 patent were not as limited. Original claim 1 recited a method of operating a computer system in a “logical process,” and the claim did not specify how many processors the system included. *See* Dkt. 148-7 at R00000587. Similarly, original claim 15 recited a computer system that included “at least one electronic data processor” for use in a “logical process.” *Id.* at R00000591.

During prosecution, the Examiner rejected original claims 1 and 15 over prior art describing a single-processor system. The Examiner found claim 1 anticipated by U.S. Patent No. 6,192,477 (“Corthell”) and claim 15 obvious in view of U.S. Patent Nos. 6,578,140 (“Policard”) and 5,673,403 (“Brown”). *Id.* at R00000561-52, 656. With respect to claim 1, the Examiner did not discuss whether Corthell discloses multiple processors, presumably because claim 1 was not limited to a number of processors. *Id.* at R00000651. With respect to claim 15, the Examiner reasoned that because the claim could be interpreted to encompass a multiprocessor system executing on multiple operating systems, the claim was obvious over Policard and Brown because Policard describes a system in which two processors operated in “dual, separate operating systems.” *See id.* at R00000650, 656.

The Examiner acknowledged based on prior remarks submitted by the applicants that the applicants appeared to be interpreting the claims as encompassing a process that executes on a single operating system using multiple processors (such as the process shown in Figure 1 above). *See id.* at R00000650. Accordingly, the Examiner recommended that the applicants amend claim 15 with “language specifying that there is a single operating system running on a multiprocessor system” to “distinguish the invention . . . over at least the Policard reference.” *Id.* at R00000650.

The applicants responded to the Examiner’s suggestion by making two relevant amendments. First, the applicants amended claims 1 and 15 to recite more than one processor. Claim 1 was amended to recite a computer system “having at least a first and second electronic data processor,” *id.* at R00000672, while claim 15 was amended to recite a “multi-processor” computer system” comprising “at least a first and second electronic data processor,” *id.* at R00000675. Second, the applicants amended the claims to specify that the multiple processors were capable of executing instructions on a “common operating system.” *See id.* at R00000672, 675. The applicants argued that these amendments overcame the Examiner’s rejections based on the Corthell, Policard, and Brown references. *Id.* at R00000679-80, 685.

The Examiner agreed. In the Notice of Allowance, the Examiner accepted “the Applicant’s argument that the prior art does not show a *single operating system* that executes on *multiprocessors* such that one processor handles processes from the Internet and other potentially malicious data in order to protect the file system on the other processors.” *Id.* at R00000709 (emphasis added). The ’247 patent claims—now reciting at least two processors—issued January 27, 2009.

In 2010, the applicants filed reissue applications, requesting that the Patent Office cancel the claims of the ’247 patent and allow new claims that “more comprehensively claim the subject invention.” *See, e.g.*, Dkt. 148-9 at R00001108. The claims of the reissue applications included a number of relevant amendments. First, instead of the “logical processes” recited in the ’247 patent claims, the reissue applications’ claims recited “browser processes.” *See, e.g., id.* at R00001099. During subsequent prosecution, these browser processes became “web browser processes.” *See, e.g.*, 148-10 at R00001452-53, 59-71. Second, all but three currently-asserted reissue claims were amended to recite “at least one electronic data processor,” in contrast to the

multiple data processors recited in the '247 patent claims. *See* Dkt. 148 at 8. In other words, certain reissued claims do not include the multiprocessor requirement that the applicants relied on to overcome the Corthell, Policard, and Brown references during prosecution of the '247 patent. These claims include claims 43 and 70 of the '500 patent, claim 67 of the '528 patent, and claim 38 of the '529 ("the single-processor claims").

B. Facts Relevant to Google's Noninfringement Defense

The remaining claims that Plaintiffs are currently asserting reissued from the '247 patent with limitations that do require two or more processors. Claim 5 of the '528 patent, and claims 30 and 49 of the '529 patent ("the multi-processor claims") recite multiple "cores" of a "multi-core" processor, and each core is defined as a physically separate electronic data processor. *See e.g.*, '528 patent at claim 5.

The multi-processor claims recite methods that include at least two processes, which the parties' experts refer to as the browser process and the renderer process. *See* Dkt. 148 at 9. The browser process is referred to in the claims as the "first web browser process," while the renderer process is the "second web browser process." *See id.* Claim 5 of the '528 patent, dependent from claim 1, is representative (emphasis added):

1. A method of operating a computer system capable of exchanging data across a network of one or more computers and having at least a first and second electronic data processor capable of executing instructions using a common operating system, comprising:

executing a *first web browser process*, capable of accessing data of a website via the network, in a first logical process within the common operating system *using the first electronic data processor*, wherein the first logical process is capable of accessing data contained in a first memory space and;

executing a *second web browser process* in a second logical process within the common operating system *using the second electronic data processor*, wherein the second logical process is capable of accessing data contained in the second memory space; and

Claims 30 and 49 of the '529 patent similarly require executing each of two “web browser processors” on a first and second core of a “multi-core processor.” *See id.*

Expert testing suggests that when Google’s Chrome browser runs on a device with an operating system such as Windows, macOS, or the operating system of a portable device, the browser and renderer processes are not executed on separate cores or processors. *Id.* at 10-11.

II. DISCUSSION

Summary judgment must be granted when there is no genuine issue as to any material fact and the movant is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c). “A genuine issue of material fact exists ‘if the evidence is such that a reasonable jury could return a verdict for the non-moving party.’” *Crawford v. Formosa Plastics Corp., La.*, 234 F.3d 899, 902 (5th Cir. 2000) (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). The court must consider evidence in the record in the light most favorable to the non-moving party and draw all reasonable inferences in favor of that party. *Thorson v. Epps*, 701 F.3d 444, 445 (5th Cir. 2012). The moving party must identify the portions of the record that demonstrate the absence of a genuine issue of material fact. *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). Once a party has made that showing, the non-moving party bears the burden of establishing otherwise. *Geiserman v. MacDonald*, 893 F.2d 787, 793 (5th Cir. 1990) (citing *Celotex*, 477 U.S. at 323). The non-moving party cannot “rest upon mere allegations or denials” in the pleadings, but “must set forth specific facts showing there is a genuine issue for trial.” *Liberty Lobby*, 477 U.S. at 248. Thus, summary judgment “is appropriate if the non-movant ‘fails to make a showing sufficient to establish the existence of an element essential to that party’s case.’” *Bluebonnet Hotel Ventures, LLC v. Wells Fargo Bank, N.A.*, 754 F.3d 272, 276 (5th Cir. 2014) (quoting *Celotex*, 477 U.S. at 322).

A. The Single-Processor Claims

Google argues that the single-processor claims are invalid under § 251 because the original '247 patent claims—which encompassed *single*-processor systems and methods—were amended during prosecution to require *multiple* processors, and then the reissued claims eliminate this multi-processor requirement. Dkt. 148 at 12-27. Thus, according to Google, the reissued single-processor claims impermissibly recapture subject-matter that the applicants surrendered during prosecution of the '247 patent.

“The recapture rule bars a patentee from recapturing subject matter, through reissue, that the patentee intentionally surrendered during the original prosecution in order to overcome prior art and obtain a valid patent.” *In re Youman*, 679 F.3d 1335, 1343 (Fed. Cir. 2012). Recapture is assessed using the following three-step inquiry:

- (1) whether and in what respect the reissue claims are broader in scope than the original patent claims;
- (2) whether the broader aspects of the reissue claims relate to subject-matter surrendered in an original application; and
- (3) whether the reissue claims were materially narrowed in other respects, so that the claims may not have been enlarged.

Greenliant Sys., Inc. v. Xicor LLC, 692 F.3d 1261, 1267 (Fed. Cir. 2012). If the answer to the first two questions is yes, and the last no, “the surrendered subject matter has crept into the reissue claims and they are barred under the recapture rule.” *In re Youman*, 679 F.3d 1335, 1345 (Fed. Cir. 2012). The recapture rule is not triggered, however, if the reissued claims are directed to overlooked aspects of the invention, i.e., patentably-distinct embodiments that are described in the specification but not originally claimed. *In re Mostafazadeh*, 643 F.3d 1353, 1360 (Fed. Cir.

2011). Whether the claims of a reissued patent violate § 251 by implicating the recapture rule is a question of law based on underlying facts. *Id.* at 1343.

Plaintiffs argue that the reissued single-processor claims do not violate the recapture rule for two reasons. First, Plaintiffs argue that the recapture rule is not triggered because the reissue claims relate to unclaimed embodiments that were described in the original specification of the '247 patent. *Id.* at 10. Second, Plaintiffs argue that summary judgment cannot be granted in light of material issues of fact concerning the third step of the recapture test. Dkt. 171 at 9-10. Thus, the dispute is whether the recapture test is triggered at all, and if so, whether the third step is met. Plaintiffs do not dispute that if the recapture test is triggered, the first two steps of the recapture test are satisfied. Dkt. 171 at 9 n.2.

The Court agrees with Plaintiffs that there are disputes of material fact concerning the threshold question of whether the reissue claims trigger the recapture rule. First, claims 1 and 15 of the '247 patent were directed to methods and systems in which a “first logical process” could access data in memory spaces within the computer hardware system but could not go beyond the computer to an outside network. *See* Dkt. 148-7 at R00000587, 591. The “second logical process,” by contrast, was defined as being “further capable of exchanging data across a network of one or more computers.” *See id.* Thus, the essence of the invention claimed in the '247 patent was isolation—only the second logical process could access the network; the rest of the system could not.

The reissued single-processor claims are directed to processes that occur on web browsers and thus are not related to isolation. As Google’s own claim construction expert acknowledged, the reissued single-processor claims are “completely different” than the claims of the '247 patent. Dkt. 171-16 at 106-07 (Expert Report of Dr. Michael Kogan). According to

Google’s expert, the ’247 patent claims relate to a “hardware isolation invention,” while the reissued single-processor claims relate to a “software invention.” *Id.* at 107. Similarly, Google’s invalidity expert, Dr. William Arbaugh, opined that the original ’247 patent only disclosed an isolated first logical process. Dkt. 65-23 (Arbaugh Decl.) at 8 (“[t]he first fundamental aspect of the applicants’ invention was to isolate the network interface from the rest of the computer system by limiting network access via a dedicated second processor.”).

Notwithstanding this testimony, the Court cannot determine whether the invention claimed in the reissued claims is patentably distinct from the ’247 patent claims as a matter of law for the following reason. Both parties agree that the relevant test for assessing overlooked aspects of an invention is the test stated in the Patent Office’s Manual of Patent Examining Procedure (MPEP)—claims are directed to “overlooked aspects” of the invention if they are “patentably distinct (1) inventions; (2) embodiments; or (3) species not originally claimed—not mere incidental features of the originally-claimed invention.” *See* Dkt. 148 at 20 (quoting Patent Office Decision quoted in *Mostafazadeh*, 643 F.3d at 1360); Dkt. 171 at 18 (citing MPEP § 1412.02(I)(B)(1)). The Patent Office’s test to determine patentable distinctiveness requires, among other things, an assessment of whether one invention is nonobvious over the other. *See, e.g.*, MPEP § 802.01. The obviousness question, in turn, is based on underlying questions of fact, none of which have been addressed and thus could not be resolved as a matter of law. *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016) (en banc) (“A determination of whether a patent claim is invalid as obvious under § 103 requires consideration of all four *Graham* factors, and it is error to reach a conclusion of obviousness until all those factors are considered.”).

Accordingly, because the threshold question of whether the recapture rule was triggered rests on underlying and unresolved facts, summary judgment cannot be granted. *See Pannu v. Storz Instruments, Inc.*, 258 F.3d 1366, 1370 (Fed. Cir. 2001) (Recapture “can involve underlying findings of fact.”). The Court defers consideration of the third-step of the recapture test until the threshold question is answered. *See Westvaco Corp. v. Int’l Paper Co.*, 991 F.2d 735, 741 (Fed. Cir. 1993) (“A determination of whether the scope of a reissue claim is identical with the scope of the original claim is a question of law”).

B. The Multi-Processor Claims

Google’s argument regarding the multi-processor claims is two-fold. First, Google argues that the multiprocessor claims “require executing (1) a ‘first web browser process’ on one processor core and (2) a ‘second web browser process’ on another different core.” Dkt. 148 at 27 (quoting claims). Second, Google contends that expert tests confirm that the accused Chrome browser, when running on a device with an operating system such as Windows, macOS, or the operating system of a portable device, does not execute the first browser process and the second renderer process on separate cores or processors. *Id.* at 10-11. Rather, Chrome executes the browser and renderer processes across multiple cores or processors. *Id.* at 27-28. Thus, according to Google, the accused Chrome browser is beyond the scope of the multiprocessor claims as a matter of law.

To establish literal infringement, the Plaintiffs must show that the accused browser “contains each and every limitation of the asserted claims.” *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1215 (Fed. Cir. 2014). “Patent infringement, whether literal or by equivalence, is an issue of fact, which the patentee must prove by a preponderance of the evidence.” *Siemens*

Med. Solutions USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc., 637 F.3d 1269, 1279 (Fed. Cir. 2011) (citations omitted).

Google's argument regarding the multiprocessor claims appears to raise a claim construction issue very late in the case. Plaintiffs dispute Google's assumption about claim scope and contend that “[t]he language of Claim 5, Claim 30, and Claim 49 do[es] not require the first and second web browser processes of Chrome to execute on separate cores.” Dkt. 171 at 3. Google argues otherwise because “Plaintiffs' experts agree with [their] plain reading of these three claims.” Dkt. 148 at 27. The dispute nevertheless concerns whether the language of the multiprocessor claims requires the browser and renderer processes to occur on separate cores or processors. The Court therefore must resolve the dispute. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) (“When the parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute.”).²

The Court holds that the plain and ordinary meaning of the first and second process terms in the multiprocessor claims does not foreclose Plaintiffs' infringement theory as a matter of law. The parties' experts can opine on whether the plain and ordinary meaning of the first and second process terms encompasses a system in which the first and second processes are executed across multiple browsers. Because the parties' experts dispute this point, a colorable infringement issue remains for the jury to resolve, and thus summary judgment on the multiprocessor claims cannot be granted.

III. CONCLUSION

² The Court has ample grounds to find that Google waived its claim construction arguments regarding the first and second process terms, but the Court declines to find waiver at this stage. *Cf. Cent. Admixture Pharmacy Servs., Inc. v. Advanced Cardiac Sols., P.C.*, 482 F.3d 1347, 1356 (Fed. Cir. 2007) (“The district court found that [defendants] waived any argument with respect to this term by failing to raise it during the claim construction phase. We agree.”)

Factual issues remain for the jury to resolve, both with respect to Google's recapture and noinfringement defenses. Accordingly, **IT IS RECOMMENDED** that Google's motions for summary judgment (Dkt. 148) be DENIED.

A party's failure to file written objections to the findings, conclusions, and recommendations contained in this report **within seven days from the entry of this Order** shall bar that party from de novo review by the district judge of those findings, conclusions, and recommendations and, except on grounds of plain error, from appellate review of unobjected-to factual findings and legal conclusions accepted and adopted by the district court. Fed. R. Civ. P. 72(b)(2); *see Douglass v. United Servs. Auto. Ass'n*, 79 F.3d 1415, 1430 (5th Cir. 1996) (en banc).

SIGNED this 9th day of January, 2017.



ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE